AMENDMENTS TO THE SPECIFICATION

Please replace the abstract with the following abstract:

ABSTRACT

A system is provided to reduce data burst overhead in an Ethernet passive optical network. During operation, the OLT transmits grant messages to a number of ONUs, wherein a grant message assigns a start time and a duration of a transmission timeslot in which an ONU may transmit an upstream data burst. In response to the grant messages, the OLT receives a number of upstream data bursts, wherein the time gap between two consecutive upstream data bursts is less than the summation of a default laser turn-on time, a default laser turn-off time, an AGC period, and a CDR period.

Please amend paragraph [0001], [0012] [0027], [0028], [0040], and [0052]as follows:

[0001] This application hereby claims priority under 35 U.S.C. 119 to U.S. Provisional Patent Application No. 60/495,649 filed on ~~13~~ 18 August 2003, entitled "Method for Timeslot Allocation to Reduce Guard Band Overhead in Ethernet Passive Optical Networks," by inventor Glen Kramer.

[0012] Embodiments of the present invention provide an EPON system that facilitates reduced overhead between upstream data bursts. In one ~~One~~ embodiment of the present invention, ~~provides a system that reduces data burst overhead in an Ethernet passive optical network which includes a central node and at least one remote node, wherein downstream data from the central node is broadcast to the remote nodes, and wherein upstream data from a remote node is~~

~~transmitted to the central node in a unicast manner. During operation, the central node~~an OLT transmits grant messages to a number of ~~remote nodes~~ONUs, wherein a grant message for a specified ~~remote node~~ONU assigns a start time and a duration of a transmission timeslot in which the ~~specified remote node~~ONU may transmit an upstream data burst. In response to the grant messages, the ~~central node~~OLT then receives a number of upstream data bursts, wherein the time gap between two consecutive upstream data bursts is less than the summation of a default laser turn-on time, a default laser turn-off time, an AGC period, and a CDR period.

[0027] FIG. 4A illustrates transmission of downstream traffic with point-to-~~pint~~ point emulation in an EPON (prior art).

[0028] FIG. 4B illustrates transmission of upstream traffic with point-to-~~pint~~ point emulation in an EPON (prior art).

[0040] The data structures and procedures described in this detailed description are typically stored on a computer readable storage medium, which may be any device or medium that can store code and/or data for use by a computer system. This includes, but is not limited to, application specific integrated circuits (ASICs), field-programmable gate arrays (FPGAs), semiconductor memories, magnetic and optical storage devices such as disk drives, magnetic tape, CDs (compact discs) and DVDs (digital versatile discs or digital video discs)~~, and computer instruction signals embodied in a transmission medium (with or without a carrier wave upon which the signals are modulated).~~

[0052] FIG. 4B illustrates transmission of upstream traffic with point-to-point emulation in an EPON (prior art). In the upstream direction, ONU 451

inserts its assigned LLID 461 in the preamble of each transmitted frame. Accordingly, PtPE sub-layer 440 of OLT 400 disseminates the frame to MAC port 431.